

**To:** Peronard, Paul[Peronard.Paul@epa.gov]  
**Cc:** Cristiano, Gina[Cristiano.Gina@epa.gov]; Merritt, Steven[Merritt.Steven@epa.gov]  
**From:** Myers, Craig  
**Sent:** Thur 6/4/2015 10:26:09 PM  
**Subject:** Re: Hazmat ID

Dangers of texting...

Gina asked about an unknown liquid. The hazmat ID system is supposed to do that against the library. Mixtures can flummox it. If we're talking diluted samples in water, IDK how it will work.

If the site experiences used only the HazMat ID and not paired with the Raman Spec unit, it was likely hit or miss. The two units together are much more reliable, as they talk via Bluetooth to compare notes before telling you their opinion. It will still have issues with things that are inherently mixtures, like refined fuels. Environmental contaminants are also going to cause interferences. We're not quite Star Trek yet :)

Sent from my iPhone

On Jun 4, 2015, at 5:09 PM, Peronard, Paul <[Peronard.Paul@epa.gov](mailto:Peronard.Paul@epa.gov)> wrote:

Hey Gina,

So we brought this thing up to Red River Supply Fire and didn't get much utility out of it. Too many interferences I think. Kerry Guy had a similar experience assisting the Arapahoe County Sherriff at a "compound" of a militia kinda guy (lots of guns, explosives and whatnot) . I imagine if you had a single compound in a fairly neat sample the thing might work well (looking over Smith's Website you'd think 32,000 compounds is impressive), but I got the impression that mixtures (such as in an oily water matrix) give it fits.

Then again that might have been operator error and I would defer to Steve and Craig's higher level of familiarity with the equipment. If this thing can truly identify up to 32,000 compounds and do it with mixtures in a variety of sample matrices then we ought to do a bunch more training with it.

paul